



U.S. Department of Energy

National Energy Technology Laboratory



January 6, 2004

MEMORANDUM FOR EMS FILE

FROM: JAN K. WACHTER
EMS REPRESENTATIVE

SUBJECT: Management Review Team Meeting

This memorandum is to document the Management Review Team meeting of January 6, 2004. These notes conform to NETL Procedure 450.1-6A, Environmental Aspects, Objectives, Targets, and Management Plans, which contain the requirements for documenting the Management Review Team Meetings, paragraph 9.f.8. Copies of these notes are provided to the members of the Management Review Team, will be posted to the EMS Roadmap on the Intranet, and the original will be filed with the EMS records.

ATTENDEES: Rita A. Bajura, Director
Tom Torkos, Associate Director, Office of Business and Logistics
Larry Headley, Associate Director, Office of Science and Technology
Jan K. Wachter, EMS Representative
Dan McCollum, Quality Manager

Carl Bauer, Deputy Director, Operations, was unable to attend the meeting.

Results of the ISO Certification Audit

NETL was recommended for ISO 14001 certification on August 22, 2003 and received the certificate on September 24, 2003. The audit identified three minor non-conformities and two opportunities for improvement. Attachment 1 (page 4) is a summary of the certification audit findings and NETL's response to the findings.

Status of Environmental Management Plans, Aspects, Objectives, and Targets

The implementation status of the Environmental Management Plans (EMPs) is shown in Attachment 2 (page 10). This table also contains the 10 significant aspects that were approved by the EMS Representative in November 2003. There will be 21 EMPs for 2004 to cover the objectives and targets listed in Attachment 2.

Status of Requested Actions by the Management Review Team

During the last management review team meeting, the Management Review Team requested that the EMS Representative continue to pursue ISO 14001 certification and to continue

implementation of the objectives and targets for 2003. ISO certification was received and the objectives and targets were implemented.

Summary of Audit Findings and Corrective Actions

Attachment 3 (page 17) shows the status of the corrective actions from all active internal and external audits. Internal Audit #8 was completed in August 2003 and a summary of the findings is shown in Attachment 3. Internal Audit #9 was completed in November 2003 and findings are still being developed and entered into the Assessment Information Input System (AIIS).

A problem was noted with individual employees closing out actions in AIIS when the action has actually been completed. Management will encourage their employees to close out actions in AIIS more promptly.

Confirmation of the Existing Targets and Objectives

Attachment 2 contains the proposed list of objectives and targets for 2004. The Management Review Team approved all of the objectives and targets for 2004 without changes.

Action Requests by the Management Review Team

1. Investigate other DOE sites to learn how they are implementing construction waste recycling and use this information for EMP 1.4, Construction Waste.
2. Generate a viewgraph for the next All-Employees meeting with what information needs to be presented to employees regarding the EMS.
3. Provide a briefing to Senior Management prior to the surveillance audit regarding the audit.
4. Provide refresher training for all employees prior to the surveillance audit.

The “Five Questions”

- Question 1: Does NETL’s EMS continue to be suitable, adequate, and effective to address NETL’s environmental aspects?

MRT Response: Yes.

- Question 2: Was the information presented adequate to carry out this evaluation?

MRT Response: Yes.

- Question 3: Does the EMS policy need to be changed?

MRT Response: No, the policy is to remain unchanged for 2004.

- Question 4: Are the objectives and targets suitable to address the environmental aspects identified?

MRT Response: Yes, the objectives/targets are approved for 2004.

- Question 5: Do the results of audit findings indicate or other circumstances warrant any changes to the EMS?

Answer: No. However, NETL will continue to improve the existing EMS to enhance efficiencies and performance.

Attachment 1: Results of ISO 14001 Certification Audit

The ISO 14001 Certification Audit was completed on August 22, 2003 with a recommendation by the lead auditor, Ken Clayman of NSF International Strategic Registrations, that NETL be certified to the ISO 14001 standard. The certificate was received on September 24, 2003.

Mr. Clayman and Mr. Shidler, the registration auditors, identified three minor non-conformities and two opportunities for improvement. These are associated with calibration, form control, identification of key characteristics and associated monitoring and measurement activities.

In addition to these results, the auditor noted the following strengths in NETL's ISO 14001 program:

- *NETL's EMS was well designed and initial implementation has been done well.*
- *NETL has a very complete and strongly implemented aspects and impacts along with a well-planned set of objectives and targets and associated environmental management plans to drive acceptance and implementation of the EMS throughout the laboratory.*
- *NETL has demonstrated management commitment to the EMS along with awareness of basic EMS elements among both federal and contractor employees.*
- *NETL's SARS process is a very well designed and implemented process for planning out projects that includes determination of potential environmental risks and development of controls to avoid those risks prior to project construction or operation.*
- *Emergency preparedness is a highlight of the NETL's EMS.*
- *NETL records management program and compliance assurance systems are well designed and well implemented.*

The ISO certification demonstrates that NETL has a solid EMS that meets the requirement of the international standard.

Surveillance Audit

The first six-month surveillance audit is tentatively scheduled for March 29-31, 2004. During these three days, Mr. Clayman will return to both sites (1) to examine how NETL has responded to the findings from the certification audit and (2) to find objective evidence of improvements to the EMS.

Surveillance audits will continue for the next three years that NSF is under contract to NETL to provide the registration auditing services. After three years, NETL will apply for renewal of the ISO 14001 certification and contract with either NSF or another registrar for these services.

We need the MRT to continue to stress to employees the importance of adhering to procedures such as SARS, the EMPs, and other procedures and processes. If we cannot prove that we are implementing our own requirements, then we will be unable to maintain certification.

Response to Non-conformities and Opportunities for Improvement

NETL's formal response to the certification audit findings are as follows:

CAR NUMBER: NETL-RA-001

Minor Nonconformity: Key Characteristics/Monitoring information was not identified in the SARS packages for the LECTR project and Boiler/Compressors support operations. Instructions on the SAQ form (F450.1-4, 7/03) requires relevant information be provided for key characteristics/monitoring where they exist. (ISO Standard: 4.5.1)

1) ROOT CAUSE ANALYSIS BY COMPANY:

- a. Failure of NETL's EMS to fully define/explain "key characteristic" and its interrelationship with NETL's environmental aspects and monitoring requirements.
- b. Failure of Responsible Persons (RPs) to fully understand how to use the Screening Analysis Questionnaire form (F450.1-4).

2) CORRECTIVE ACTION BY COMPANY:For Root Cause a:

Corrective Action NETL-RA-001-1: Revise SAQ form (F450.1-4) with more explicit direction on how to better complete the key characteristic, monitoring, and aspect information on the form. Provide "example" lists of key characteristics within the form as a means to educate and gain consistency. Also, revise SAQ form to allow for more text in the text boxes. Expected completion date: November 1, 2003 [AIIS: 350-2003-0311]

For Root Cause b:

Corrective Action NETL-RA-001-2: Review all R&D SARS packages for key characteristics/monitoring information. This can be done as part of the annual update for those packages that have not come due for review. For those packages that have been reviewed since April 15, 2003 (issue date of the R&D SARS procedure), they need to be updated by the RP immediately. Expected completion date: February 1, 2004 for packages reviewed from April 15 to September 1 and on the annual review dates for other packages. [AIIS: 350-2003-0312]

Corrective Action NETL-RA-001-3: Review all Support Operations SARS packages for key characteristic/monitoring information. This can be done as part of the annual review since the new procedure that requires the SAQ was only recently released. Expected completed date: as annual reviews are completed. [AIIS: 350-2003-0313]

Corrective Action NETL-RA-001-4: Review all active Facility SARS packages for key characteristics/monitoring information. This should be done for all active SARS and for

any new SARS. Inactive SARS packages should not be reviewed. Expected completion date: November 1, 2003 [AIIS: 350-2003-0314]

3) PREVENTIVE ACTION BY COMPANY:

For Root Cause a:

Preventive Action NETL-RA-001-5: Revise NETL's EMS-related directives (NETL Procedure 450.4-15) to more fully define "key characteristic" and its interrelationship with NETL's EMS. Expected completion date: November 1, 2003 [AIIS: 350-2003-0315]

For Root Cause b:

Preventive Action NETL-RA-001-6: Develop and deploy a computer based training module for RPs explaining how to complete an SAQ. Expected completion date: February 1, 2004 [AIIS: 350-2003-0316]

CAR NUMBER: NETL-RA-002

Minor Nonconformity: Gauges and transmitter equipment on the Morgantown boilers included calibration stickers indicating calibration was due in 6/2000 or 6/2001. No evidence was available to show that calibration had been completed by or since those dates. The support specialist indicated that calibration was due annually. (ISO Standard 4.5.1)

1) ROOT CAUSE ANALYSIS BY COMPANY:

- a. Failure to follow calibration requirements and procedures.
- b. Lack of instructions for the use of calibration stickers.

2) CORRECTIVE ACTION BY COMPANY:

For Root Cause a:

Corrective Action NETL-RA-002-1: Ensure that all gauges and transmitters in the boiler building (MGN, B-5) are calibrated and brought up to date as needed. Expected completion: November 1, 2003 [AIIS: 350-2003-0306]

For Root Cause b:

Corrective Action NETL-RA-002-2: Review the calibration procedure and make changes as needed to clarify the use of the calibration stickers and ensure that calibration requirements are consistent across all equipment that requires calibration. Expected completion date: November 1, 2003 [AIIS: 350-2003-0307]

3) PREVENTIVE ACTION BY COMPANY:

For Root Cause a:

Preventive Action NETL-RA-002-3: Review other facility equipment to ensure that calibrations are up-to-date throughout the facility. Expected completion date: December 1, 2003 [AIIS: 350-2003-0308]

Preventive Action NETL-RA-002-4: Review R&D equipment to ensure that calibrations are up-to-date throughout the R&D complexes. Expected completion date: November 1, 2003 [AIIS: 350-2003-0309]

Preventive Action NETL-RA-002-5: Review ES&H equipment to ensure that calibrations are up-to-date throughout the complex. Expected completion: November 1, 2003 [AIIS: 350-2003-0310]

For Root Cause b:

There are no further preventive actions for Root Cause b – see corrective action above which address the root cause fully.

CAR NUMBER: NETL-RA-003

Minor Nonconformity: EMS forms and documents in active use were found that did not include document control information required by P251.1-1, Directives Management System and/or P420.3-1, Operating Procedures. Examples are listed in lead auditor's notes. (ISO Standard 4.4.5.)

1) ROOT CAUSE ANALYSIS BY COMPANY:

Implementation of recent requirements for SOPs, forms, and other controlled documents is not 100%, due to lack of knowledge and enforcement of new requirements.

2) CORRECTIVE ACTION BY COMPANY:

Corrective Action NETL-RA-003-1: Ensure the removal of all obsolete documents and forms from the support operations work areas and facilities and ensure their replacement with controlled SOPs and forms. Generate new, controlled forms where required. Expected completion date: December 1, 2003 [AIIS: 350-2003-0317]

Corrective Action NETL-RA-003-2: Ensure the removal of all obsolete documents and forms from the R&D work areas and ensure their replacement with controlled SOPs and forms. Generate new, controlled forms where required. Expected completion date: December 1, 2003 [AIIS: 350-2003-0318]

3) PREVENTIVE ACTION BY COMPANY:

Preventive Action NETL-RA-003-3: Issue a policy reminder to all employees from the Deputy Director for Operations that all procedures and forms shall be under document control and obsolete documents should be removed immediately from the work areas and that this policy will be enforced. Expected completion date: September 15, 2003 [AIIS: 350-2003-0319]

FINDING NUMBER: RA-004

***Opportunity for Improvement:** Based on review of calibration records at the 500# PCFC and CHF, NETL may want to consider including information regarding calibration tolerances, ranges, and/or allowable limits on the records and/or associated documents. (ISO Standard 4.5.1)*

1) ROOT CAUSE BY COMPANY: Lack of requirement to include such information on calibration records or calibration forms.

2) CORRECTIVE ACTION BY COMPANY:

Corrective Action NETL-RA-004-1: Ensure that calibration records related to site operations have calibration tolerances, ranges, and/or allowable limits on them. Expected completion date: December 1, 2003 [AIIS: 350-2003-0320]

Corrective Action NETL-RA-004-2: Ensure that calibration records related to R&D operations have calibration tolerances, ranges, and/or allowable limits on them. Expected completion date: December 1, 2003 [AIIS: 350-2003-0321]

Corrective Action NETL-RA-004-3: Ensure that calibration records related to ES&H operations have calibration tolerances, ranges, and/or allowable limits on them. Expected completion date: December 1, 2003 [AIIS: 350-2003-0322]

3) PREVENTIVE ACTION BY COMPANY:

Preventive Action NETL-RA-004-4: Review the calibration procedure and ensure that there are the appropriate requirements within the procedure for this type of information to be included on the calibration records and communicate this requirement to all R&D and Support Operations RPs. Expected completion date: November 1, 2003 [AIIS: 350-2003-0323]

FINDING NUMBER: RA-005

Opportunity for Improvement: P450.4-4A, Section 3.b.(5) (5/29/03) NETL Operating Plan – it does not appear that NETL has conducted proactive communications with external parties as required in the operating plan, although some efforts to do this activity have been made. (Standard 4.4.3)

1) ROOT CAUSE BY COMPANY: Failure to implement the requirement of the operating plan because of security constraints placed on DOE-sponsored meetings.

2) CORRECTIVE ACTION BY COMPANY:

Corrective Action NETL-RA-005-1: Modify the operating plan to remove the requirement and find other ways to be proactive with respect to communications that do not have security concerns. Expected completion date: October 1, 2003 [AIIS: 350-2003-0324]

3) PREVENTIVE ACTION BY COMPANY:

See corrective action which addresses the root cause fully.

Attachment 2: Status of Environmental Management Plans

The status of each of the 21 Environmental Management Plans (EMPs) is shown in the attached table. The 21 plans correspond to the 21 objectives that were approved by the Management Review Team in December, 2002.

Also in the table are the proposed objectives and targets for 2004. The EMS Representative has approved the Significant Environmental Aspects for 2004, which remain unchanged from 2003. However, this year, each Significant Aspect may or may not have an objective and target associated with it. If a Significant Aspect does not have an objective/target associated with it, then the explanation is provided in the STATUS column. An environmental aspect can be significant, but not have an objective/target associated with it. However, NETL must maintain operational control of the aspect through the established environmental programs. Not having an objective/target simply means that NETL feels that no further improvements should be made (at this time) or an objective/target is not feasible (at this time).

EMPs RPs are scheduled for training in January 2004 to develop the EMPs for this year. During this training (in order to deliver consistency of approach across plans), they will actually develop the plan with assistance from the ES&H Division.

For 2004, there will be 21 EMPs that relate to the objectives and targets that are shown in Attachment 2 -- provided that the MRT approves the objectives and targets.

Attachment 2: Status of 2003 Environmental Management Plans and Proposed Objectives and Targets for 2004

EMP	Objective/Target	2002 Target/ Metric Achieved	2003 Target/ Metric Achieved	2004 Target	Status
Aspect 1 – Waste Generation, Management, and Disposal Practices					
1.1 Non-Hazardous Waste Generation	75% reduction by 2005 and 80% reduction by 2010 based on 1993 baseline (641 tons)	281 tons (56% reduction)	241 tons (62% reduction)	200 tons (69% reduction)	Cleaned out Building 141 which caused big increase in non-hazardous waste.
		210 tons (67% reduction)	220 tons (66% reduction)		
1.2 Hazardous Waste Generation	90% reduction by 2005, using a 1993 baseline (18.46 tons)	6.00 tons (67% reduction)	4.62 tons (75% reduction)	3.62 tons (82.5% reduction)	Cleanout of old chemicals caused increase in 2003.
		1.51 tons (92% reduction)	3.01 tons (83.7% reduction)		
1.3 Recycling	Increase recycling of sanitary waste streams to 45% by 2005 and 50% by 2010	34%	37%	41%	Will continue to track this to ensure that NETL is meeting the objectives/targets.
		51%	53%		
1.4 Construction Waste	To study the possibility of recycling construction wastes	Report	Report	Modify Construction Contracts, Processes and Language	
		Report not completed	Report not completed		
Aspect 2 – Energy and Fuel Use					
2.1 Energy Conservation	Reduce energy consumption through life-cycle cost effective measures	Report	Submit B-26 Retrofit	Complete B26 Retrofit	
		Report delivered	Approved by FEMP		

EMP	Objective/Target	2002 Target/ Metric Achieved	2003 Target/ Metric Achieved	2004 Target	Status
2.2 Energy Use	Reduce energy use per square foot in laboratory and industrial (mixed-use) facilities by 20% by 2005, using a 1990 baseline (369 x 10 ³ BTU per square foot)	310 x 10 ³ BTU/ft ² (16% reduction)	306 x 10 ³ BTU/ft ² (17% reduction)	300 X 10 ³ BTU/ft ² (19% reduction)	Will continue to track this metric to ensure compliance with the executive order.
		247 x 10 ³ BTU/ft ² (33% reduction)	274 x 10 ³ BTU/ft ² (25.7% reduction)		
2.3 Annual Petroleum Fuel Consumption	Reduce annual petroleum consumption (adjusted for mileage) for NETL's vehicular fleet by 20% by 2005 using 2001 baseline (adjusted for mileage) of 0.0367 gallons per mile	.0349 gallons per mile (5% reduction)	.0330 gallons per mile (10% reduction)	.0312 gallons per mile (15% reduction)	
		.0391 gallons per mile (6% increase)	0.0416 gallons per mile (13% increase)		
2.4 Usage Rate of Alternative Fuels	Increase usage rate of alternative fuels to 75% by 2005 and 90% by 2010 in areas where alternative fuel infrastructure is available. Baseline in 2001 is 13.7%	30%	45%	65%	This is expected to increase with the installation of the PGH refueling station in 2004.
		16.6%	18.1%		
2.5 Energy and Environmental Leadership in New Building Design and Construction	By incorporating sustainable design features and following Executive Order 13123 and DOE Order 430.2A requirements, NETL will attain Leadership in Environmental and Energy Design (LEED) certification and Energy Star designation for its new major building construction.	----	Progress Report	Complete energy efficient designs for the two buildings	
		----	Progress Report delivered		

EMP	Objective/Target	2002 Target/ Metric Achieved	2003 Target/ Metric Achieved	2004 Target	Status
Aspect 3 – Hazardous Materials Procurement, Consumption, and Storage					
3.1 Chemical Inventory	Reduce the chemical inventory (number of containers) by 20% by 2005 based on 2002 baseline (6600 containers)	6,600 containers	6,138 containers (7% reduction)	5,676 containers (14% reduction)	Baseline was adjusted from 4748 to 6600 because baseline did not include the gas cylinders.
		6,600 containers (baseline)	4801 end (27% reduction)		
Aspect 4 – Industrial Wastewater Treatment Plan Operations					
4.1 Notices of Violation (NOVs)	To reduce the number of NOV's issued	2	1	0	
		1	3		
Aspect 5 – Air Emissions					
5.1 Large Chillers Using CFC's	By 2005, retrofit or replace 100% of chillers greater than 150 tons of cooling capacity and manufactured before 1984 and use Class 1 refrigerants (Baseline number of chillers fitting this category = 2)	Zero units to be replaced in 2002	Zero units to be replaced in 2003	Zero units to be replaced in 2004	2 units are to be replaced in FY2005 in PGH, no MGN chillers to be replaced because they are all non-Class 1. This will reduce the inventory by 1,400 lbs of Class 1 CFC - 1,200 lbs in the chillers and 200 lbs in storage.
		0	0		
5.2 Class 1 Refrigerants	Eliminate use of Class I refrigerants by year 2010, to the extent economically practicable, and to the extent that safer alternatives are available (inventory = 190 lbs)	190 lbs	169 lbs	148 lbs	This only includes the Class 1 refrigerants that are not included in 5.1, Chillers.
		190 lbs (baseline)	117 lbs		

EMP	Objective/Target	2002 Target/ Metric Achieved	2003 Target/ Metric Achieved	2004 Target	Status
5.3 Greenhouse Gases	Reduce greenhouse gas emissions attributed to facility use through life-cycle cost effective measures by 25% by 2005 and 30% by 2010, using 1990 as a baseline (67.4 million lbs)	53.9 million lbs (20% reduction)	51.7 million lbs (22% reduction)	51.2 million lbs (24% reduction)	This is going to be difficult to meet because of lack of available “green” energy in WV and PA. Reductions have been the result of conservation rather than “green” purchasing.
		58.9 million lbs (13% reduction)	58.1 million lbs (13.8% reduction)		
5.4 Alternate Fueled Vehicles	Acquire at least 75% of light-duty vehicles as alternative fueled vehicles by 2005 and 90% by 2010	75%	75%	75%	Will continue to track this metric to ensure compliance to the executive order.
		82%	100%		
5.5 Emissions of Toxic Release Inventory (TRI) Chemicals	To reduce emissions of chemicals on the TRI List by 20% by 2005 using 1997 as baseline (3,850 lbs)	3,369 lbs (12.5% reduction)	3,273 lbs (15% reduction)	3,176 lbs (17.5% reduction)	Will continue to track this metric to ensure compliance to the targets.
		3,365 lbs (13% reduction)	2053 lbs (46.7% reduction)		
5.6 VOC Emissions	Reduce VOC emissions by 50% by 2005 using 2002 baseline (42 lbs)	42 lbs released to atmosphere	35 lbs released to atmosphere (17% reduction)	28 lbs released to atmosphere (34% reduction)	Strict controls on the purchase of paint cans must be implemented since a paint booth is not being installed.
		42 lbs (baseline)	92 lbs (119 % increase)		
Aspect 6 – Toxic Chemicals and Energy Releases					
6.1 Chemical Handling Facility	To improve the way the CHF stores and handles chemicals	Construction Activities	Preliminary Design	Construction complete	
		None completed	Completed design		

EMP	Objective/Target	2002 Target/ Metric Achieved	2003 Target/ Metric Achieved	2004 Target	Status
Aspect 7 – Surface Water and Storm Water Discharge					
7.1 Water Discharge	To better understand the impacts of NETL and nearby off-site activities on surface water/storm water resources	Report	Report	N/A	NETL understands the contributors which are managed through the surface water and construction programs. No objectives/targets are needed for this significant aspect.
		Report	Report	N/A	
Aspect 8 – Green Purchasing					
8.1 Buying Green - Warehouse	Increase NETL storeroom purchases of items in EPA-designated categories to 100%	100%	100%	100%	Will continue to track this metric to ensure compliance with the executive order.
		99.4%	100%		
8.2 Buying Green – Credit Cards	Determine the baseline for potential “green” purchases made with credit cards	N/A	N/A	Determine baseline	This depends on the ability to modify the current SPS system.
		N/A	N/A		
Aspect 9 – Offsite Noise Generated Onsite					
9.1 Off-site Noise	Using 2002 as baseline year, reduce the no. of noise-related (valid) complaints from neighbors and the no. of demonstrated exceedences of local noise ordinances due to normal site activities based on monitoring activities	0 complaints and exceedences	0	N/A	There have been no complaints for 2 years, so objectives/targets are not needed for 2004. NETL will maintain and measure present noise levels through the environmental noise control program.
		0 complaints and exceedences (baseline)	0	N/A	

EMP	Objective/Target	2002 Target/ Metric Achieved	2003 Target/ Metric Achieved	2004 Target	Status
Aspect 10 – Non-Industrial Land Use					
10.1 Land Use	To conserve and enhance NETL's non-industrial lands	Report	Report	Implement 2 Recommend ations from the Non- Industrial Land Use Committee	
		Report delivered	Report delivered		

Attachment 3: Summary of Audit Findings/Corrective Actions

There are 101 open and 17 pending findings related to ISO 14001/EMS. The following is the status of audits performed since January 2003. Of note, is the ISO Registration Audit conducted in August 2003.

Audit Title/Date	Number of Findings Corrective/ Preventive Actions/ Observations	Summary
Documentation Review January 2003	11 11/0/0 11 completed 0 open	Focus: Document Control The report found that there were many ES&H/EMS documents that were out of date, there were conflicting documents on the Intranet (multiple versions), and several documents were not controlled.
Internal Audit #6 February 13- March 6, 2003	52 46/3/3 50 complete 2 cancelled 0 open	Focus: Office of Science and Technology While many employees were well-aware of the EMS, some employees are still unable to articulate the EMS policy. Several SARS documents were noted that were incomplete, out-of-date, or missing. Several interviewees stated that their supervisor had not discussed ISO 14001 with them. Chemicals were found that had did not have barcodes. January 2004 Update: 2 open findings belong to OST. There was confusion over the location of the findings so they cancelled the finding. This will be reassessed in future assessments. Findings dealt with out of date documents in the lab area.
Readiness Assessment March 3-6, 2003 Concurrent Technologies Corporation	68 55 ¹ /5/8 60 complete 8 open	Focus: Entire EMS Findings were related to full implementation of objectives/targets, document control, operational control, corrective/preventive action system, and the auditing process. Positives noted were good awareness of EMS policy, emergency response program, Grapevine system, Roadmap. January 2004 Update: Most of the open findings have been completed, just not closed out by the RP. One deals with training which is a long term project to provide accurate training records to the employee's desktop.
Internal Audit #7 May 7-21, 2003	10 5/0/5 4 complete 0 pending 6 open	Focus: Office of Science and Technology Employees were still unaware of some aspects of the EMS such as the auditing program, identification of environmental aspects, and the corrective/preventive actions system. Some employees still state that their supervisors do not communicate with them about ISO 14001 issues. Several employees were not aware of receiving special EMS training related to their projects/activities. Chemicals found without barcodes. January 2004 Update: Open findings mostly deal with ISO awareness issues that are not yet closed out by the RP.
Desk Audit July 8-11, 2003 NSF Corporation (Registrar)	6 6/0/0 ² 6 complete	Focus: EMS Documentation Review for On-site Readiness Review The primary issues noted in this report were related to control of documents on the Roadmap and to compliance assurance. This was a preliminary assessment of EMS documentation

¹ CTC reported 40 findings distributed as 5 major (nonconformance to the standard) and 35 minor findings (potential nonconformance to the standard) and 34 observations. NETL created 54 corrective actions, 5 preventive actions and 8 observations findings to address the CTC findings and observations.

On-site Readiness Review by NSF Corporation (Registrar)	34 34/0/0 ³ 24 complete 10 open	Focus: EMS Readiness for Registration Audit Two opportunities for improvement were noted in monitoring/measurement and internal auditing. There were no major or minor findings. January 2004 Update: Still working on many of these actions. Duplicate findings associated with different individuals which could be closed out.
Internal Audit #8	81 38/0/43 17 complete 11 pending 53 open	Focus: Internal EMS and ES&H procedures, first time that internal procedures have been audited so many of the findings dealt with out of date procedures or procedures that were not being followed. January 2004 Update: Since many of the corrective actions are related to procedures, several are in pending status which means the procedure is being updated.
Registration Audit August 19-22, 2003	19 12/7/0 4 complete 4 pending 11 open	Focus: Certification Audit The registrar noted 3 minor nonconformances and 2 opportunities for improvement; however, NETL was recommended for certification and received the certification in September 2003. January 2004 Update: The 19 corrective/preventive actions address the 3 NCs and 2 OFIs. Most are related to SARS documentation reviews and updates and to monitoring and measuring activities and associated documentation.
Internal Audit #9 November 3-20, 2003	Findings are still being evaluated and entered into AIIS.	Focus: Internal EMS, ES&H procedure, and SARS packages. First time for review of SARS packages by ISO auditors.

² The report actually reported 3 issues which do not rise to the level of a finding. NETL created six corrective actions to address the 3 issues.

³ The report actually contained two opportunities for improvement (OFIs) and do not rise to the level of a finding. NETL created 18 corrective actions to address these OFIs and other issues in preparation for the RA.

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